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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,976

09/29/2006

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EXAMINER

AHMED, SHEEBA

ART UNIT

PAPER NUMBER

1794

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,976	<b>Applicant(s)</b> WADA ET AL.	
	<b>Examiner</b> SHEEBA AHMED	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/06; 12/06; 8/07</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Preliminary Amendment*

1. The Preliminary Amendment submitted in September 29, 2006 has been entered in the above-identified application. Claims 2, 3, 7, 8, and 9 have been amended. **Claims 1-9 are pending.**

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a methacrylic resin composition comprising a methacrylic resin composition (C) obtained by polymerizing a methacrylate polymer (A) in the presence of acrylic crosslinked elastic particles (B), the methacrylate polymer (A) being obtained by polymerizing a monomer mixture including 50 to 100 wt% of alkyl methacrylate and 0 to 50 wt% of alkyl acrylate, the acrylic crosslinked elastic particle (B) being obtained by copolymerizing a monomer mixture (b) including 50 to 100 wt% of alkyl acrylate and 50 to 0 wt% of alkyl methacrylate, and a polyfunctional monomer including two or more non-conjugated double bonds per a molecule, wherein 0.01 to 30 parts by weight of an ultraviolet absorber represented by the general formula (1) is copolymerized relative to 100 parts by weight of the methacrylic resin composition (C).

It is unclear from the Specification and the claims whether the ultraviolet absorber is copolymerized with component A or component B. Similar ambiguities exist in claim 6.

Claim 2 recites that the acrylic crosslinked elastic particle (B) content is 5 to 45 wt%. However, it is unclear what is the weight % based upon – is it based upon the total weight of the composition C or is it relative to component A. Similar ambiguities exist in claim 7.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishida et al. (US 6,387,497 B1).

Nishida et al. disclose organic particles each constituted of a core made from an organic polymer and a surface layer formed from a methacrylate resin on the surface of the core. In one of the particles, the core is made from a copolymer comprising 80 to 99 weight percent of a lower alkyl acrylate and 1 to 20 weight percent of a polyfunctional vinyl monomer to exhibit rubberlike elasticity, while in another of the particles, the core is made from a copolymer of a reactive benzotriazol compound and a (meth)acrylic

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monomer to exhibit an ultraviolet absorbing activity (abstract). The cores comprise a copolymer of lower alkyl acrylates and a polyfunctional vinyl monomer. The preferable lower alkyl acrylates to be used for the cores are acrylates esterified with alkyl groups having 1 to 4 carbon atoms. The examples of such acrylates are methyl acrylate, ethyl acrylate, n-butyl acrylate, and i-butyl acrylate. The polyfunctional vinyl monomers used for the cores are those having at least two ethylenically unsaturated bonds in a molecule, for example, aromatic cross-linking agents, such as divinyl benzene, or acrylic cross-linking agents, such as (poly)ethyleneglycol di(meth)acrylate and trimethylolpropane tri(meth)acrylate. Acrylic cross-linking agents are preferable because of their weathering resistance. The composition of the monomers forming the cores comprises 80 to 99 weight percent of the said lower alkyl acrylate and 1 to 20 weight percent of the said polyfunctional vinyl monomer. The cores are spherical resin particles having an average diameter of 1 to 16 microns. The organic particles have a surface layer of methacrylate resin formed on the surface of the above-mentioned cores. The surface layer is preferably formed of a polymer of lower alkyl methacrylates, or a copolymer of lower alkyl methacrylates and a polyfunctional vinyl monomer. The preferable lower alkyl methacrylates used for the surface layer are methacrylates esterified with an alkyl group of 1 to 4 carbon atoms such as, methyl methacrylate, ethyl methacrylate, n-butyl methacrylate, or i-butyl methacrylate. Two or more of the methacrylates can be used in combination. The average diameter of the first synthetic organic particles of the having the above layer ranges usually from 1.02 to 18 microns.

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Alternatively, the organic particles comprise cores of organic polymer, the said organic polymer being a copolymer of a reactive benzotriazol compound and a (meth)acrylic monomer, and having ultraviolet-ray absorbing function; and a surface layer of methacrylate resin formed on the surface of the above cores; and having ultraviolet-ray absorbing function. The reactive benzotriazol is a compound represented by the formula (1) given at the top of Column 6 (which is identical to the structure of the claimed Invention). The examples of the (meth)acrylic monomer are methyl (meth)acrylate, ethyl (meth)acrylate, and propyl (meth)acrylate. The preferable amount of the reactive benzotriazole compound being combined in the said organic polymer is 1 to 40 parts by weight, to 100 parts by weight of (meth)acrylic monomers. The preferable amount of the polyfunctional monomers being combined in the organic polymer is 0.5 to 60 weight percent of the whole of the monomers constituting the said organic polymer. The organic particles have a surface layer of methacrylate resin on the surface of their cores. Preferable materials for the surface layer are the polymers of lower alkyl methacrylates, or the copolymers of lower alkyl methacrylates and polyfunctional vinyl monomers (See column 3, lines 35-67, column 4, lines 1-25, column 5, lines 52-67 and column 6, lines 15-60). All limitations of claims 1 and 6 are disclosed in the above reference. With regards to the limitation in claim 6 that the methacrylic resin film is "for being laminated on a molded article comprising a polyvinyl chloride resin composition containing a plasticizer", the Examiner takes the position that such a limitation is an intended use limitation. Furthermore, Nishida et al. teach

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that the particles are used in cosmetics and thus must inherently form a film when applied to the surface of the skin.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (US 6,387,497 B1).

Nishida et al., as discussed above, do not disclose that their coated organic particles are used to form film and that the particles have an average particle size of more than 100 nm and 400 nm or less.

However, it would have been obvious to one having ordinary skill in the art to reduce the size of the coated particles given that a smaller particle size provides better dispersion.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEEBA AHMED whose telephone number is (571)272-1504. The examiner can normally be reached on Monday-Friday from 8am to 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sheeba Ahmed/  
Primary Examiner, Art Unit 1794